

OCT 02 2002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Raymond J. Dattwyler, Gerald Seinost, Daniel Dykhuizen, Benjamin J. Luft and Maria J.C. Gomes-Solecki

Application No.: 09/596,746 Group Art Unit: 1645

Filed: June 19, 2000 Examiner: Rodney P. Swartz

For: GROUPS OF *BORRELIA BURGDORFERI* AND *BORRELIA AFZELII*  
THAT CAUSE LYME DISEASE IN HUMANS

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to Assistant Commissioner for Patents, P.O. Box 2327, Arlington, VA 22202

on 9-26-02 Date Signature Melissa Bertoline

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TRANSMITTAL OF FORMAL DRAWINGS

Assistant Commissioner for Patents  
P.O. Box 2327  
Arlington, VA 22202

Sir:

Transmitted herewith are formal drawings consisting of 8 sheets, Figures 1 through 8, for filing in the subject patent application.

Acceptance of the formal drawings is respectfully requested.

Respectfully submitted,  
HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

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Date: 9-26-02



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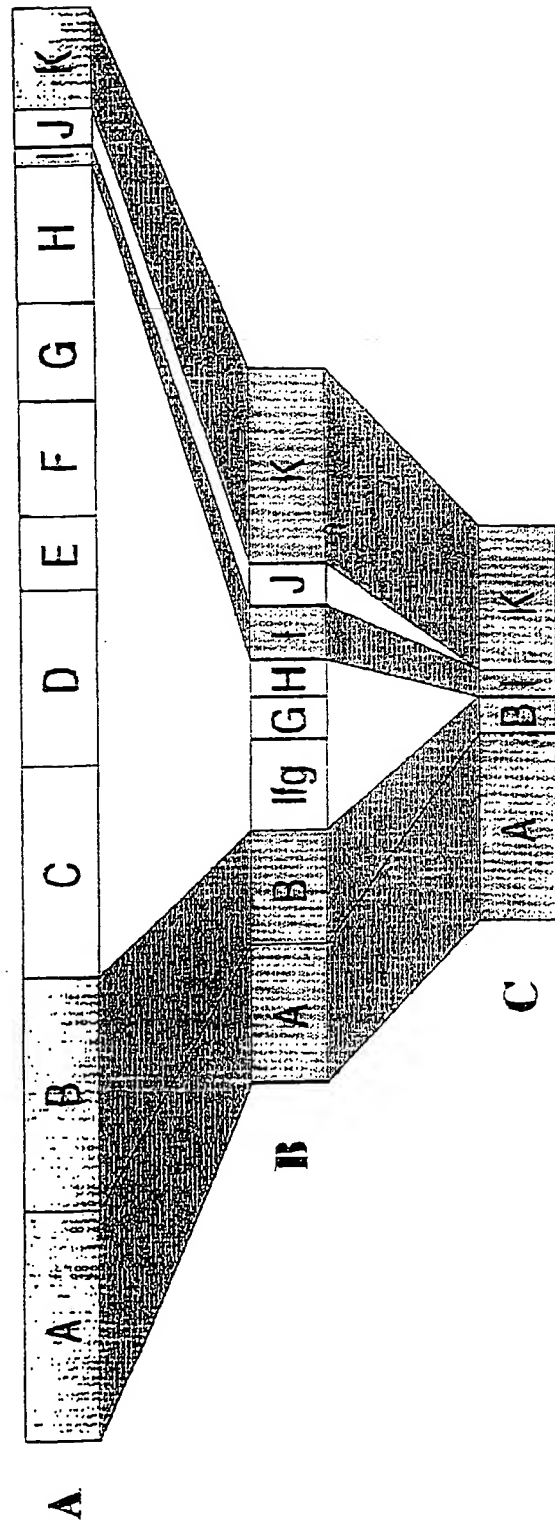


Fig. 1



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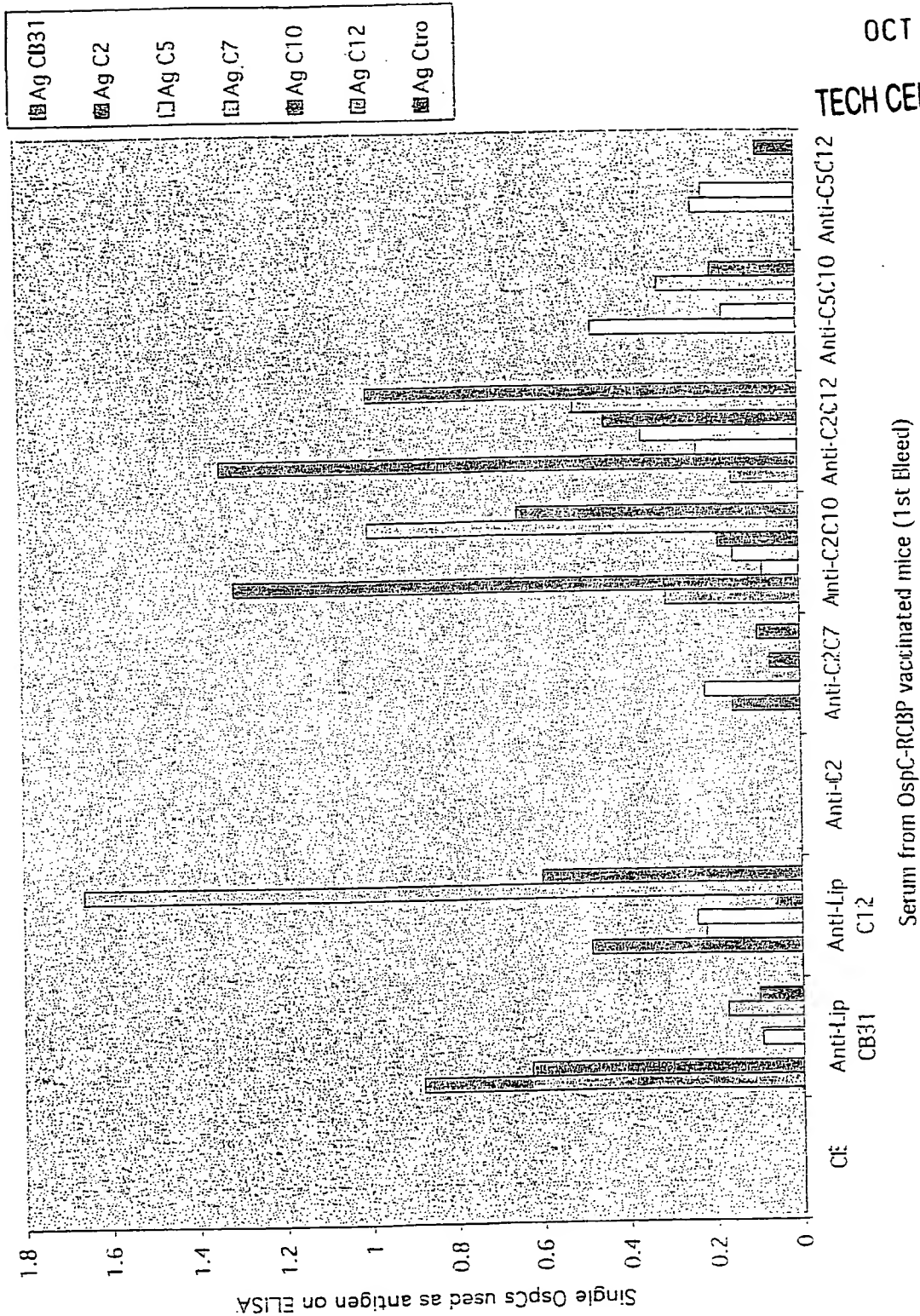


Fig. 2



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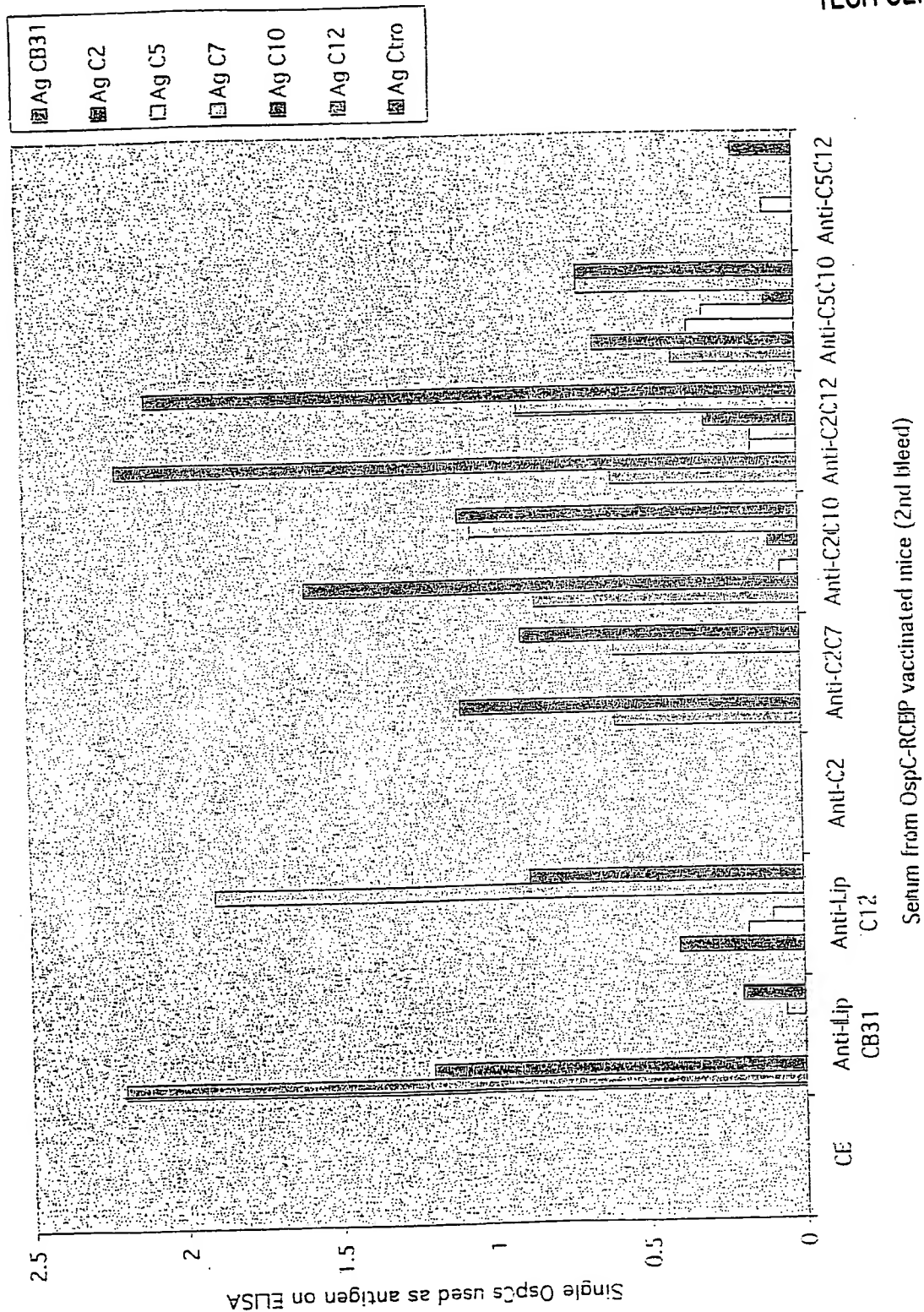


Fig. 3

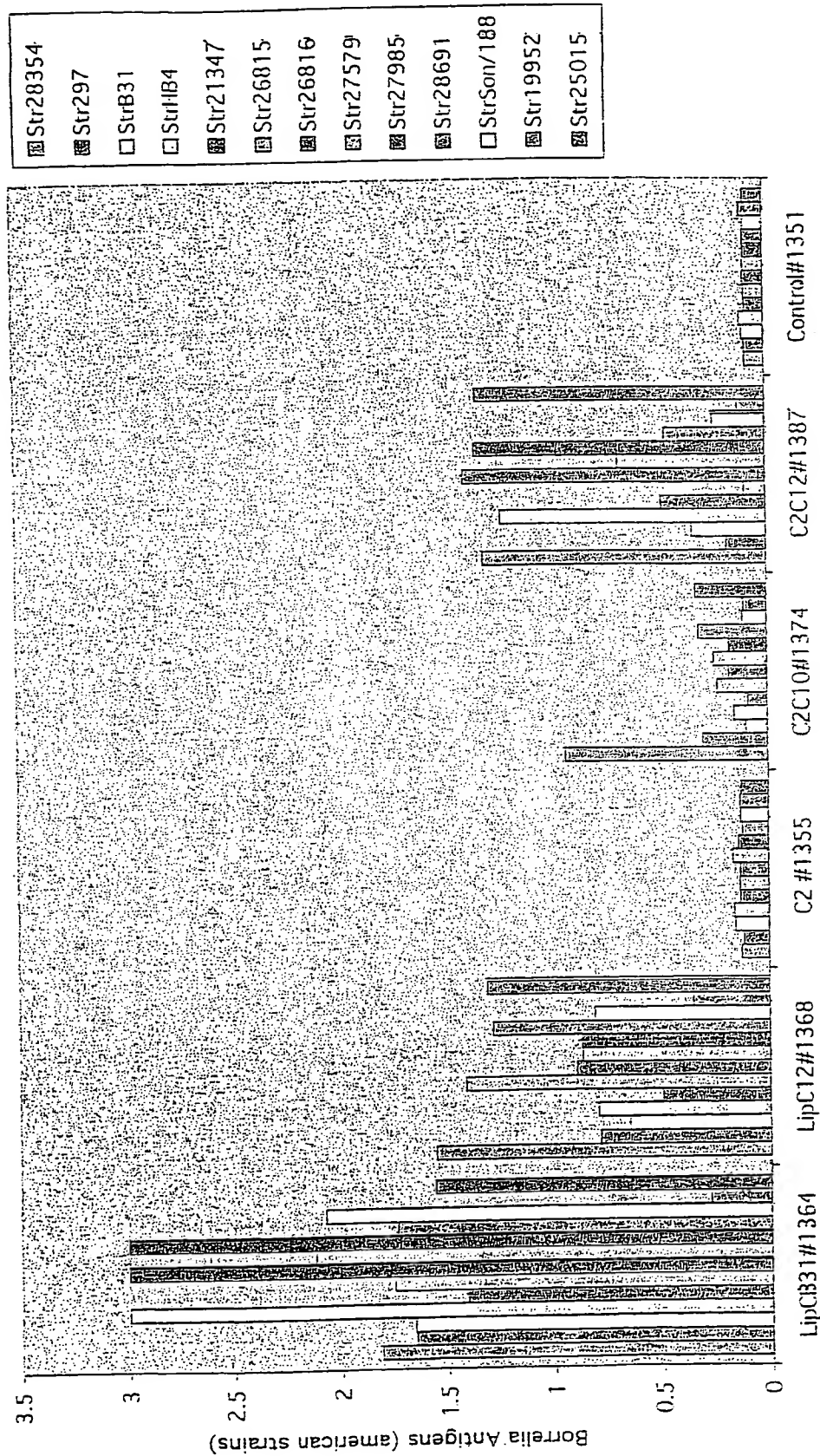


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Serum from OspC-RCBP Vaccinated mice

Fig. 4



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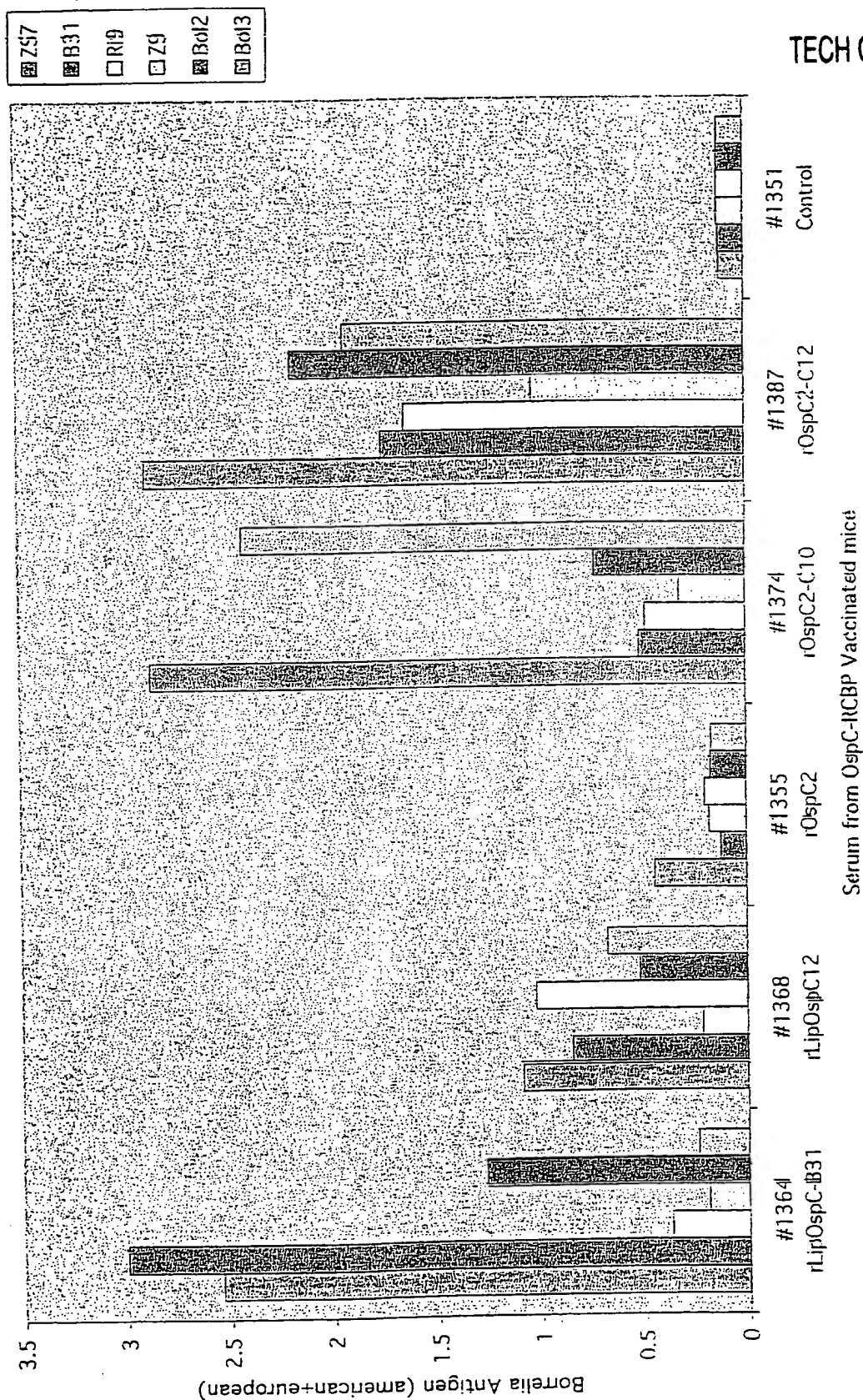


Fig. 5



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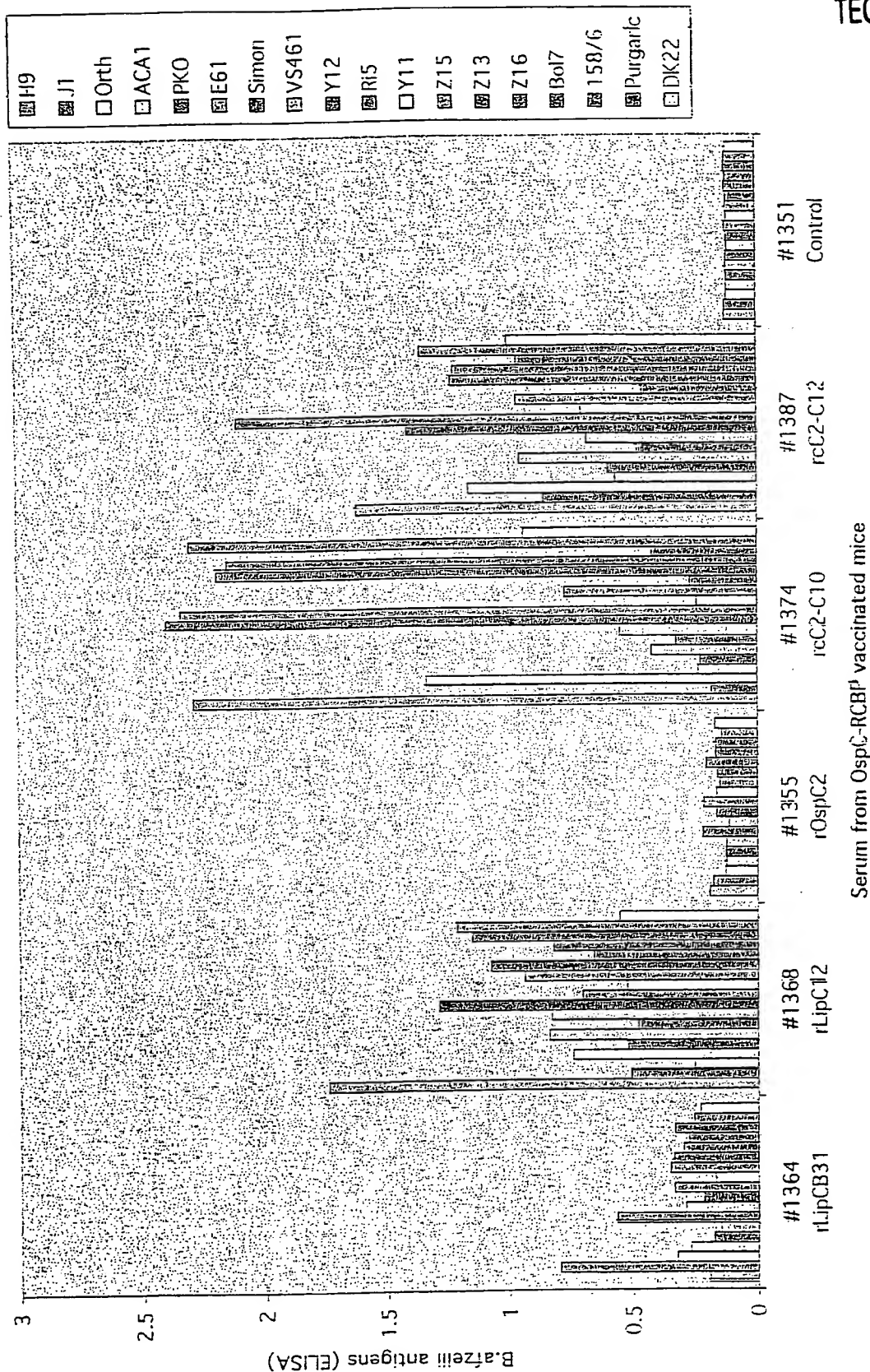


Fig. 6





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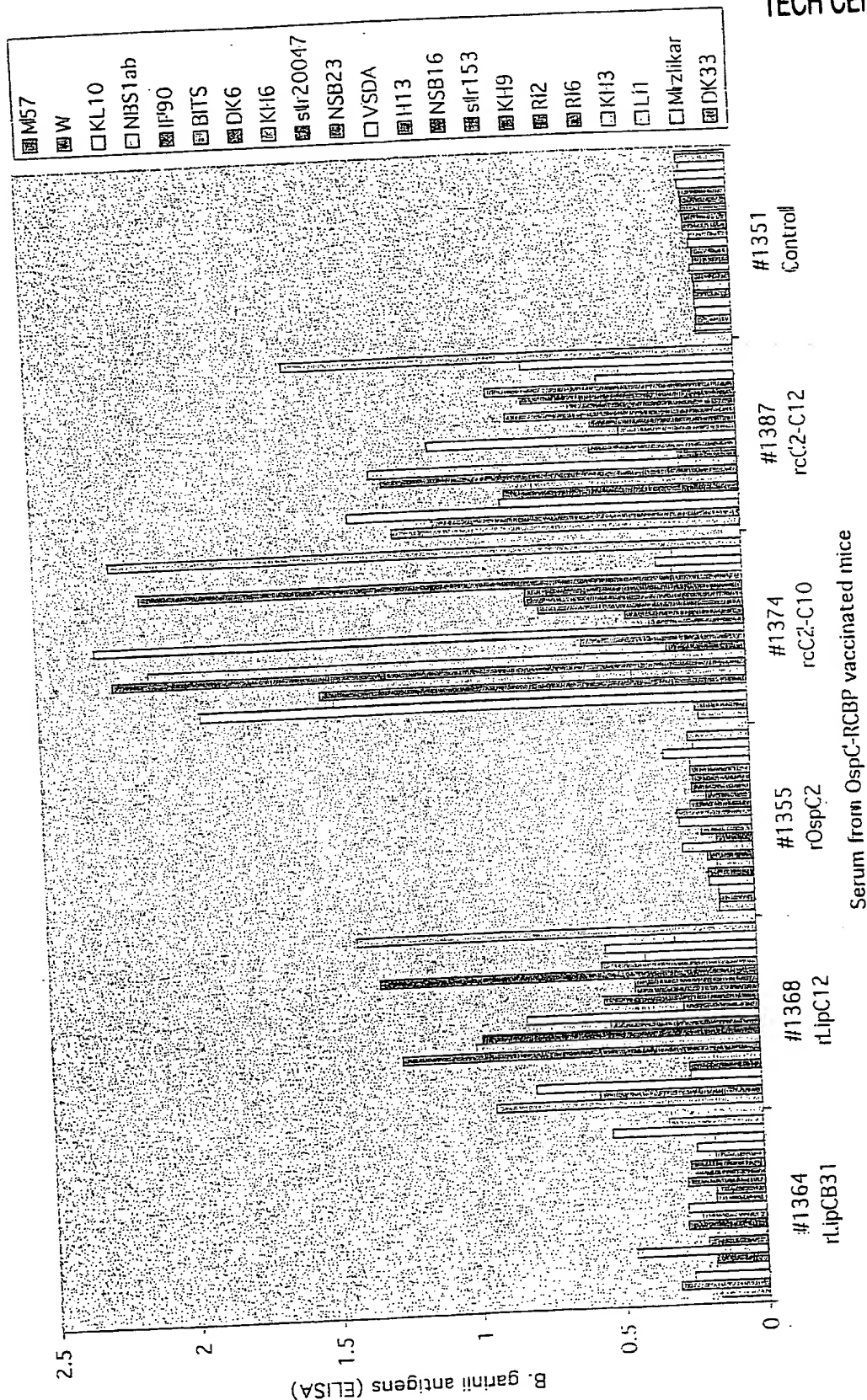


Fig. 7





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	Early Lyme: #P(total)				Sensitivity		Potential cross-reactivity: #P(Total Tested)				Specificity	
	EMA	EA	Ac. Dissem.	Ac. Conval.	#P(Total)	(%)	Syphilis	SLE & RA	Normals End.	Normals NonEnd.	#P(Total)	(%)
C1 (chrt1)	6(10)	ND	4(10)	8(8)	18(28)	64%	1(10)	1(10)	2(10)	0(8)	4(38)	11%
C2 (chrt2)	4(10)	ND	5(10)	8(8)	17(28)	61%	0(10)	2(10)	2(10)	0(8)	4(38)	11%
C1C10 (chrt3)	7(10)	ND	4(10)	5(8)	16(28)	57%	4(10)	1(10)	2(10)	0(8)	7(38)	18%
C1C12 (chrt4)	2(10)	ND	3(10)	5(8)	10(28)	36%	2(10)	0(10)	0(10)	ND	2(30)	7%
B31C10 (chrt5)	8(10)	ND	6(10)	5(8)	19(28)	68%	2(10)	2(10)	4(10)	0(8)	8(38)	21%
B31C12 (chrt6)	7(10)	ND	6(10)	6(8)	19(28)	68%	1(10)	1(10)	1(10)	0(8)	3(38)	8%
C2C7 (chrt7)	5(10)	6(8)	3(10)	4(7)	18(35)	51%	1(11)	0(10)	1(20)	0(8)	2(49)	4%
C2C10 (chrt8)	4(10)	7(8)	5(10)	4(7)	20(35)	57%	0(11)	0(10)	1(20)	0(8)	1(49)	2%
C2C12 (chrt9)	5(10)	7(8)	6(10)	4(7)	22(35)	63%	0(11)	1(10)	3(20)	0(8)	4(49)	8%
C5C7 (chrt10)	7(10)	ND	4(10)	5(8)	16(28)	57%	2(10)	2(10)	0(10)	ND	4(30)	13%
C5C10 (chrt11)	6(10)	ND	4(10)	5(8)	15(28)	54%	0(10)	0(10)	0(10)	ND	0(30)	0%
C5C12 (chrt12)	8(10)	ND	8(10)	6(8)	22(28)	79%	5(10)	3(10)	3(10)	0(8)	11(38)	29%

Fig. 8

EMA = Erythema Migrans Acute  
 EA = Acute Disseminated  
 Ac. Dissem. = Acute Disseminated  
 Ac. Conval. = Acute Convalescent  
 #P = Number of positives  
 SLE = Systemic Lupus Erythematosus  
 RA = Rheumatoid Arthritis  
 End. = Endemic Field Workers  
 NonEnd. = Non Endemic